



Harmonie MUSC builds

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Harmonie MUSC builds

- Obtain source code from Hirlam svn address
svn co https://svn.hirlam.org/branches/harmonie_MUSC
cd harmonie_MUSC
- Check your favorite configuration file
 - Under util/makeup/ directory : see for config.*
- Decide experiment name for your builds
- Run build : 1st time and subsequent times
util/makeup/build -e expname config_file_name
util/makeup/build # looks for \$HOME/.makeup_rc

Harmonie MUSC builds



- You can edit files under util/src/
 - Subsequent build-command will pick up your changes
- Rationale of having expver is to be able to have several different versions online where to build experiments executables
- Once util/makeup/build has been completed successfully, the executables end up in bin/ directory:
 - Unfortunately binaries of different experiments are currently written to the same directory i.e. they overwrite each other
 - However, there is a solution: define experiments in separate working directories - see later presentations on experiments and source code modification

util/makeup/build -options



- -c (Re-)run configure only
- -m Re-run make only (usually the default)
- -r Restart from scratch
- -e expver Compilation done under expver/ dir
- -i Ignore compilation errors
- -n # Use parallel make with # processors
- -S Do not use sub-processes in configure
- -h Display help i.e. any other options
- -v Increase verbosity of the output

Harmonie MUSC on Linux



- For Linux, consider tested config-files in util/makeup/ :
 - config.<name>.gfortran , where the <name> is one of the Linux flavors : ubuntu, debian or fedora
- Prerequisites:
 - /bin/ksh or /bin/ksh which is a link to /bin/bash
 - flex & bison for lex & yacc
 - MPI : Either mpich2 or openmpi should work
 - Check their respective commands mpif90 and mpicc
 - Check their include and library paths in advance
 - Libs blas & lapack, usually in /usr/lib or /usr/lib64

ECMWF c1a/c1b builds



- If you prefer to use ECMWF's supercomputer for builds, you can start off from a prebuilt system
- Login to c1a/c1b via ecaccess.ecmwf.int and follow the steps below :

```
cd $TEMP
```

```
ecp ec:/fm4/util_src.prebuilt.tgz .
```

```
/opt/freeware/bin/tar zxf util_src.prebuilt.tgz
```

```
util/makeup/build -e expver \
```

```
config.ECMWF.ibm_pwr6_aix.xlf.mp+openmp.grib_api_netcdf
```